

UNIVERSITATEA DE MEDICINĂ ȘI FARMACIE „CAROL DAVILA”
BUCUREȘTI ȘCOALA DOCTORALĂ DOMENIUL MEDICINĂ



**INNOVATIVE APPROACH THROUGH
ULTRASOUND ENDOSCOPY TO THE PATIENT
WITH BILIO-PANCREATIC PATHOLOGY
HABILITATION THESIS SUMMARY**

CANDIDATE:

Assoc. Prof. STAN-ILIE CRISTINA MĂDĂLINA

University of Medicine and Pharmacy “Carol Davila” Bucharest

Faculty of Medicine, Department 5

Gastroenterology, Bucharest Emergency Clinical Hospital

BUCUREȘTI
2025

In my habilitation thesis, I present a comprehensive synthesis of my professional, scientific, and academic journey since completing my doctorate in 2012. This work is not merely a collection of accomplishments, but the reflection of a coherent and sustained effort to integrate advanced clinical practice with rigorous academic inquiry and dedicated teaching. It stands as the corollary of my multifaceted activity, rooted in the daily practice of medicine and a continuous drive to offer the best possible care to my patients, the most relevant training to my residents, and a collaborative and supportive environment for my colleagues. The thesis is structured to demonstrate my readiness to guide the next generation of researchers as a doctoral supervisor.

I have structured this thesis into two main chapters, preceded by an introduction and followed by conclusions and a comprehensive bibliography. The first chapter is dedicated to a systematic exposition of my professional, medical, didactic, and scientific achievements since defending my doctoral thesis. This section begins with biographical milestones to provide context for my career continuity and then details my professional evolution, teaching activities, and research contributions. I then provide a cumulative, argumentative analysis of the originality, relevance, and coherence of these contributions, focusing on three main areas of scientific interest that have defined my work. The second chapter outlines my personal plans for the future evolution of my academic career. This section is conceived as three distinct development projects: one for my professional medical activity, one for my didactic activity, and one for my research activity, which is further subdivided into the continuity of my previous research and the pursuit of new scientific directions

My professional evolution has been forged within the demanding environments of the Bucharest University Emergency Hospital and Sanador Clinical Hospital, where I have progressed from a specialist doctor to a consultant in Gastroenterology. From the outset, my curiosity and pragmatic spirit guided me toward the challenging field of interventional gastroenterology, a path I cultivated under the mentorship of Professor Gabriel Constantinescu. This specialization allowed me to immerse myself in a tertiary center's full spectrum of endoscopic procedures, from diagnostic techniques to complex interventions for bleedings, digestive stenoses, and, most significantly, advanced biliopancreatic pathologies. My passion has increasingly focused on endoscopic ultrasound (EUS), particularly EUS-guided drainage using lumen-apposing metal stents (LAMS) and the radiofrequency ablation of pancreatic neoplasms. My commitment to remaining at the forefront of my field is

evidenced by a relentless pursuit of continuous education. This includes over 100 postgraduate courses and hands-on training sessions, such as the ESGE fellowship programs in Dusseldorf (2017) and Milan (2024), the World Endoscopy Organization's International School of EUS (WISE) in Korea (2019), and multiple advanced courses with the American Society for Gastrointestinal Endoscopy (ASGE). This dedication has been recognized through numerous awards, including the prestigious ASGE Cook International Endoscopy Grant for Interventional EUS in Miami (2017) and the National Scholar Award at UEGW Vienna (2018).

A significant aspect of my career has been my dedication to building and contributing to the professional community. A pivotal achievement was co-founding and presiding over the Romanian Group of Young Gastroenterologists, the first legally constituted society representing young specialists in our country, which we successfully affiliated with the United European Gastroenterology (UEG) Young Talent Group. Our efforts were recognized with consecutive UEG Activity Grants in 2017 and 2018, which helped us organize impactful educational events. My engagement is further reflected in my active membership in over a dozen national and international professional bodies, including ESGE, ASGE, ACG, and ECCO. In parallel, my academic career at the "Carol Davila" University has progressed from University Assistant in 2014 to Associate Professor in 2023. In my teaching, I prioritize a practical approach for fourth-year medical students, ensuring they have direct and sustained contact with patients to understand the complex clinical realities of gastroenterology. This didactic philosophy extends to the creation of a rich portfolio of educational materials, including co-authoring a seminal textbook, "Gastroenterologie - ediția a II-a," and contributing to over 40 book chapters, providing essential resources for students and residents alike.

The most tangible proof of my academic and clinical integration is the annual international workshop, "Bucharest Live Endoscopy," which I have co-directed since its inception in 2018. Now preparing for its sixth edition, this event has transformed our clinic into an internationally recognized training center, where we host world-renowned experts. This platform not only allows for the live demonstration of premier, advanced endoscopic procedures but also fosters a unique environment for hands-on learning and international collaboration. My research activity, which is the core of this thesis, is intrinsically linked to this dynamic clinical and educational setting. To date, I have contributed to over 200 scientific publications, with more than 50 indexed in ISI journals. My research has been

supported by several grants, including a "Young Researchers" project I directed, titled "Early, non-invasive diagnosis of pancreatic cancer by determining genetic and serological tumoral markers". My scientific work is characterized by its originality and direct clinical relevance, focusing on advancing ultrasonographic techniques. I have published case series on rare pathologies, such as duodenal gangliocytic paragangliomas, and led retrospective studies that have had a direct impact on our clinical protocols. Furthermore, our studies on managing complex peripancreatic collections have demonstrated high success rates, with almost 100% technical success and a clinical resolution rate exceeding 80%, providing a solid evidence base for our minimally invasive methods.

Looking forward, my plans for professional, didactic, and research development are focused on deepening my expertise in the innovative endoscopic ultrasound management of biliopancreatic diseases. Professionally, I aim to expand our center's capabilities in the most advanced therapeutic EUS procedures. Having already amassed a significant institutional experience with over 5 000 EUS procedures, including more than 100 complex drainages of peripancreatic fluid collections using both pigtail stents and LAMS (such as the Hot-Axios system), I am positioned to further refine and teach these intricate techniques. My goal is to standardize a comprehensive EUS-guided therapeutic service, including choledochoduodenostomy, gastroenterostomy, and hepaticogastrostomy, offering minimally invasive solutions to patients deemed inoperable. A key area of future development will be the therapeutic application of EUS-guided radiofrequency ablation (EUS-RFA) for pancreatic cancer and premalignant lesions, a promising frontier for which we have already laid the groundwork and have encouraging preliminary data.

My didactic project is to continue building upon our established model of hands-on, immersive training. I will work to formalize our fellowships for both national and international specialists and continue to mentor residents through a structured curriculum that takes them from basic endoscopy to advanced interventions. My research will follow this trajectory, focusing on multi-centric, prospective studies designed to validate these new therapeutic approaches and establish clear protocols. My ultimate research goal is to develop integrated diagnostic and therapeutic pathways that can offer new hope to patients with biliopancreatic malignancies, who often present at advanced stages. By attracting new grants and expanding our collaborative network, I intend to lead research that not only pushes the boundaries of interventional endoscopy but also translates directly into improved survival and quality of life for our patients.

In essence, this thesis outlines a vision for a career dedicated to the constant pursuit of excellence—in healing, in teaching, and in discovery—and I am eager to channel this dedication into mentoring a new generation of medical innovators.